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ABSTRACT

A study investigated the immediate recall protocol as a means of determining what second language learners retain of a spoken text. Three factors in comprehension were considered: topic familiarity, topic accessibility, and topic structure. A dialogue, a news broadcast, and a popular song were all presented to groups of beginning-level students of German, who were then asked to write down, in English, all they could remember of the texts. Students were then asked to listen to and report on any one of the texts again. Two groups had no prior information about the texts, and two groups had varying amounts of printed information about them. Results show that increasing amounts of information produced statistically significant differences in student performance. It is concluded from these findings that: (1) students should be encouraged to listen to the full text and not interrupt the listening process, (2) the protocol is useful as a measure of text comprehensibility, and (3) comprehension increases with the appropriateness of the task presented. (MSE)

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"The Immediate Recall Protocol as an Elicitation Technique in the Listening Modality of University-Level Students of German."[1]

ABSTRACT

The immediate recall protocol offers a promising means of determining what learners retain when asked to listen to a spoken language text. Tapping the content and structure of the short term memory should yield insights into the processes that learners use, consciously or unconsciously, to perceive, absorb, store, and retrieve language material. In the research summarized in this presentation it will be shown that three interrelated factors determine comprehension of listening material: 1) topic familiarity, 2) topic accessibility, and 3) topic structure. Three texts (a dialogue, a news broadcast, and a popular song) were presented to groups of beginning-level students of German, who were asked to write down, in English, as much as they could recall about the texts after listening to each one once. They were then asked to listen to one of the three texts again; the choice of text was theirs. The protocols generated were analyzed statistically. In general, the type of text presented has a statistically significant effect on student performance. Other factors, such as specific level of instruction, order of presentation of texts, choice of text to listen to a second time, and academic grade, do not seem to be statistically significant. The experiment was conducted first in December 1986 with 37 volunteers from the first three semesters ([German] 101, 102, 203) of university-level German at the University of Wisconsin-Madison. They were told nothing about the three texts they would be hearing. In April 1987 the experiment was conducted again, but with 48 students from three sections of only the second semester (102). One of the groups (A02) was presented the three texts without prior information (cf. December 1986 experiment. The other two groups (J02, S02) were given varying amounts of printed information about the three texts. Increasing amounts of information produced statistically significant differences in student performance, as reflected in their protocols.

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I. LISTENING. We are surrounded by sound. Our earliest experiences are reinforced by sounds: toys rattling, adults chattering, crib and classmates vocalizing, nature humming, ourselves singing. We are also surrounded by light. However, while it is possible to shut out light, it is almost impossible to shut out sound. As a result, one of the earliest mental processes to develope involves sorting out the various kinds of sounds that surround us. We separate animate from inanimate sounds, such as the sounds of pets from the sounds of appliances. We separate animal sounds from human sounds, such as the sounds made by parrots from those made by parents. We separate physical, non-symbolic, human sounds from symbolic human sounds, such as the vocalizations of companions at a picnic from the stomach rumblings resulting from energetic socializing.

When learning to deal with language, additional processes come into play. We learn to attach significance to sonic phenomena such as pitch, volume, direction of voice, the age of speakers, their sex, emotional state, regional accent, and other vocal and physical idiosyncracies. We also learn to deal with the phenomenon of linearity of spoken language, that is, the fact that a spoken text occurs in a measurable time frame which can be speeded up or slowed down, predicted or discounted, but which cannot be placed parallel in time, as is the case with most reading tasks.

II. RESEARCH. Summary discussions of the pertinent research into the nature of listening comprehension are presented by Byrnes (1984)[1], Richards (1983)[2], Winitz et al. (1981)[3], and Joiner (1986)[4]. In essence, the following four point should be kept in mind when dealing with listening comprehension in a second language learning environment:

1. Listening involves actively attending and assigning meaning to auditory stimuli. The term "passive," even the term "receptive," is thus inappropriate to discussions of listening comprehension.

2. There are various developmental stages in listening, ranging from perception of a "stream of [relatively meaningless] sound" through comprehension of isolated words, formulaic phrases, clauses and sentences, to "general comprehension of unedited speech." (Taylor, 1981[5]). Listening comprehension, as such, does not exist.

3. Knowledge and recognition of linguistic structure and lexical meaning are important to comprehension, but not essential to it.

4. Even so-called "beginners" can deal with unedited authentic language material, if the tasks assigned are appropriate to the cognitive and affective background of the listener.

In other words, real spoken language is motivated, it reflects the world of the listener, it relates immediately to the listener, and it happens quickly. Even prepared texts such as play readings and news broadcasts, where the spontaneity and redundancy of the spoken language may be reduced, operate within

a time and motivation frame which relates to the listener's background.

III. PROTOCOL. The term "Immediate Recall Protocol" is most often associated with Meyer (1975)[6] who conducted research into reading processes in English as a native languages. In the field of second language learning, Bernhardt (1983, 1986)[7] has made considerable contribution to the topic, especially in German. The purpose of the present research is to replicate research with the immediate recall protocol and reading in an environment involving the listening modality. For purposes of the research under discussion here, a "protocol" is distinguished from a summary or similar "gisting" activity in that a protocol asks listeners to listen to a given text, usually only once, although always without external aids (such as notes), and then to write down, in complete utterances in their native language (English), everything they recall from the text. They need not feel that they understand everything, simply empty their short term memory of its input.

IV. ASSUMPTIONS. The following assumptions were made about the use of the immediate recall protocol in the listening modality.

1. The ability to recall material in a listening text is based upon: (a) topic familiarity (e.g., a sermon as text type), (b) topic accessibility (e.g., sermon delivered as sermon), and (c) topic structure (i.e., sermonic language), in that order. This assumption derives from the concept of "script," as defined by Richards (1983)[8], namely: "Script or schema knowledge is what we know about particular situations, and the goals, participants, and procedures which are commonly associated with them. Much of our knowledge of the world is organized around scripts, that is, memory for typical episodes that occur in specific situations." Another term for this process is "top down," based upon a holistic processing model, as opposed to "bottom up," which works from individual facts, structures, and lexical items.

2. Knowledge of the structure and vocabulary of the target language is not sufficient to comprehension or recall of a text. Knowledge of the language helps only if the overall topic of the text is comprehended.

3. Different types of texts require different kinds of processing tasks in order to maximize recall, although learners at any level of proficiency can deal with unedited or authentic second language texts, given the proper pedagogical context.

V. PROCEDURES. The research procedure involved presenting students with three texts in an audio laboratory, specifically a dialogue, a news broadcast, and a popular song, presented in that order. Forty students from the first three semesters (hereafter referred to as 101, 102, and 203, for the first, second, and third semesters respectively) of German language instruction at the University of Wisconsin-Madison volunteered to participate in the first experiment in December of 1986.

The students were told nothing about the texts they would be hearing. Nor were they told that half of them would be randomly

assigned to listen to the three texts in the order of news broadcast, dialogue, song. They first listened to each text without interruption. After each text they wrote down everything recalled, in English and in complete sentences. Between each text presentation there was a three-minute pause in which they were to write their protocols. After having listened to all three texts, each student was asked to listen to one of the three texts of his or her choice a second time. The protocols were collected and scored using a scheme originally devised by Meyer. Additional data, such as course grade and other biographical information, were also collected from each student.

In April of 1987 a second experiment was conducted, however involving three classes of students from only the second semester (German 102), that is, from the same course level. One group served as a control (hereafter labeled "A02"), similar to the three groups (levels) in December. The two other groups (hereafter labeled "J02" and "S02") received varying amounts of information about each text that they were about to listen to. The "J02" group was told that the first text would be a dialogue between two students, and that the second text would be a news broadcast. The "S02" group, however, were told that the first text would be a dialogue between two students in Berlin, and that the second text would be a news broadcast with three news items and a weather. None of the groups was told anything specific about the song ahead of time; experience shows, however, that the sonic qualities of a song serve as their own best advanced organizers, and that this song in particular ("Sex Appeal") tapped familiar experiences in all listeners. Otherwise, all six groups, the three December 1986 levels and the three April 1987 sections, produced the same kinds of protocols, analyzed according to the same techniques.

Five questions, and their underlying statistical hypotheses, were of immediate interest:

1. Do different text types (dialogue, news, song) effect performance significantly differently?
2. Does previous experience in the language, as represented by language course (semester/section) of the student, effect performance significantly?
3. Does the order of presentation of the texts effect performance, defined as the number of weighted points awardable to a given protocol?
4. Does course grade in the course reflect performance?
5. Does listening to a text a second time significantly increase the amount of material recalled?

The factors thus analyzed were: (1) protocols on the three texts, both first and second listenings, (2) the order of presentation of the first two texts (the third text, a song, was in third position throughout the experiment), (3) course (level/semester) of the student, and (4) grade in the course from which the student came.

VI. ANALYSIS. The statistical model was an Analysis of Variance where the three texts are viewed as three treatments[9] within three levels, which across the two experiments means three semesters or three sections.[10] The ANOVA of the various factors under discussion yielded the following results:

1. The three texts generated significantly different protocols in all subjects, based upon the ANOVA. Question 1, and its underlying hypothesis, is thus answered in the affirmative. That is, there are differences in overall performance across text. Plotting the three texts together show that Text 2 (news) is generallly more difficult to process than Text 1 (dialogue) and Text 3 (song), if presented without advanced information, regardless of semester/section. At the same time, Text 1 generated the most consistently significant differences, as revealed by the Friedman Test and Tukey-q confidence intervals.

2. Regarding academic level, there are no significant difference in performance by first semester students (101) in the December 1986 experiment. All texts were equally difficult or easy for these students. Differences began to reveal themselves between the first semester and the second semester (102), with the third semester (203) not significantly different from the second. However, the three groups from April replication of the experiment revealed significant differences in terms of group performance. The one critical factor here was, of course, the amount of knowledge about the text prior to listening to a given text. Increasing amounts of prior knowledge, in the form of the advanced organizers indicated, thus improves recall, especially with Text 2, where no information was worse than even a little information!

3. The order of presentation may be influential upon performance, especially if Text 2 is presented before Text 1, but the current data do not appear to support this hypothesis, primarily because of small cell size. Anecdotal reactions from students support the conclusion that presenting Text 2 before Text 1 affects at least students' confidence in the ability to recall material from either text, but the statistics do not.

4. The grade received in a course does not reflect performance. The scale is crude, with only five integral differences (A, B, C, D, F, i.e., 4.0, 3.0, 2.0, 1.0, 0.0) plus half grades between A and B (AB, i.e. 3.5) and between B and C (BC, i.e., 2.5). Also, course grades are based on factors in addition to ability to recall material from unedited listening texts. It was not possible to compare student performance on the protocol procedure with, for example, performance on some standardized listening comprehension measure, such as the AATG National German Examination.

It should be noted that the December 1986 experiment consisted entirely of volunteers, who as a group tended to be more motivated academically, while the April 1987 groups consisted of entire sections of German 102 where all motivational and performance levels were represented, more or less randomly distributed. In general, then, the April groups seem more

representative of students in first-year German courses at the University of Wisconsin-Madison.

5. Listening a second time normally adds only additional factual information, if no advanced organizers are inserted between listenings. If the topic is not recognized the first time, a second listening does not add much at all.

In other words, what difference there is exists in the second and third semester groups, when compared with the first semester group. First semester (German 101) students seems to have found all three texts equally easy/difficult. Also, Text 1 (dialogue) seems to be most significantly different from other two texts. Most likely it is easiest, since graphs show general drop in performance on Text 2 (news) and appproximately equal performance on Text 3 (song) compared with Text 1. What difference there is exists in the second and third semester groups, and in the second and third sections of the April 1987 experiment. Recall does increase from semester to semester and with a little help from your teachers!

VII. IMPLICATIONS.

1. Students should be encouraged to listen to complete text. Many students feel that if they do not understand one part of text, they have not understood anything. Normally, texts cannot be stopped at the first ambiguity. Indeed, they are destroyed as text if interrupted.

2. Each text is different, but all texts contain some input comprehensible to all learners. Nothing in a text is too "primitive" to use to develop student comprehension skills. Nor is anything so complex that most learners cannot get something out of it. In other words, you would be surprised what learners do comprehend. Perhaps we ask the wrong questions. The IRP helps us determine just what learners do comprehend.

3. Comprehension increases with the appropriateness of the task presented. With beginning learners, very general tasks (answers to questions such as "what is the man talking about?" "where does the conversation take place?" "are the speakers young or old?" etc) can be expected. With students in second or third year courses, tasks such as outlining the text (taking notes), or recycling the information to form new texts, or even transcribing parts of texts, may be appropriate. These tasks should be assigned before listening to a given text type for the first time, although with subsequent experience listening to authentic texts, more general tasks may be appropriate.

APPENDICES

TEXT 1 - dialogue (scoring) from Reden Mitreden Dazwischenreden.
TEXT 2 - news broadcast (scoring) from Bayrischer Rundfunk
TEXT 3 - song (scoring), "Sex Appeal"
STUDENT DATA (DECEMBER 1986)
STUDENT DATA (APRIL 1987)
MEANS and STANDARD DEVIATIONS
ANOVA on December 1986 experiment
ANOVA on April 1987 experiment
Friedman Test (December 1986) confidence intervals
Friedman Test (April 1987) confidence intervals
Group averages across texts (December 1986)
Group averages across texts (April 1987)
Group grade point averages (December 1986, Apri 1987)
SAMPLE PROTOCOLS [only from German 102 both semesters]
INSTRUCTIONS TO STUDENTS
STUDENT QUESTIONNAIRE

TEXT 1

(from: Claire Kramsch & Ellen Crocker. Reden Mitreden Dazwischenreden. Boston, MA: Heinle & Heinle, 1985.)

4	Two strangers are speaking
3	There are two people speaking; this is a dialogue
3	They introduce themselves
1	There is a man
1	There is a woman
1	He greets her
1	His name is Martin
1	[His name is] Schlichenmeyer
1	It is in the morning
1	Her name is Helga
1	[Her name is] Kunold
3	He asks her something
2	[He asks her] where she is from
2	He has been living in the city for a while
1	[They are in] Berlin
2	She is from another city
1	[She is from] Göttingen
3	She asks him something
2	[She asks him] where he is from
2	He is not from the city/Berlin
1	He comes from Stuttgart
1	[He comes from] the area around Stuttgart
3	He asks her something
2	[He asks her] how long she has been in Berlin
2	She has not been in Berlin long
2	She does not know her way around
1	[She does not know her way around] very well
1	The city/Berlin is so big
3	She asks him something
2	[She asks him] for help
2	They are students
1	He will help her
1	[He will help her] after the lecture
2	They will look around later
1	[They will look around] the city
1	Martin says "OK"
2	They speak familiarly
2	They have different accents
2	They do not seem enthusiastic
1	He is German
1	She is German

TEXT 2

(from: Bayrischer Rundfunk, 3. Program, 19 July 1986)

4	It is a news broadcast
3	They are giving an overview
1	It is the Bavarian Broadcast/Network
1	The gong signals the time
1	It is one o'clock
1	It is one o'clock in the afternoon/13.00
2/3	Someone is taking a trip
1/2	Pope John Paul II is taking a trip
1	The pope is visiting France
1	There have been bombings
1	[There have been bombings] over the last few weeks
1	Many security precautions have been taken
2/3	Somebody was taken in for questioning
1/2	His name is Walesa
1	A leader was interrogated
1	The leader is Polish
1	Something was founded
1	A (new) council was founded
1	It is for the Solidarity movement
1	it is a provisional council
1	He was taken in because of this council
1	He was questioned in Danzig
2/3	Somebody wants something
1/2	(Chancellor) Kohl wants something
1	He wants a voting program
1	The program involves the CDU
1	[The program involves the] CSU
1	He wants a joint voting program
1	[He has wanted this program] in the past
1	There was a "No" vote
1	[There was a "No" vote] from Munich/München
2/3	The broadcaster gives the weather report
1/2	The weather will remain as it has been
1	[The weather will remain] sunny
1	[The weather will remain] dry
1	He gives the high temperature(s)
1	The high will be between two temperatures
1	The high will be at least 14°
1	The high will be at most 20°
1	The temperatures are reported in Centigrade/Celsius

TEXT 3

"Sex Appeal" - c Georg Danzer, 1975

1/2	This is a song
1	A man is singing
3/4	Any comments pertaining to his personality or the fact that he is doing a parody, etc.
2/3	He has sex appeal
2/3	He doesn't have much in general
1	He doesn't have a house
1	He doesn't have a castle
1	He has a bank account
1	His bank account is not large
1	[His bank account is not] very large
1	He doesn't enter into discussions much
1	He doesn't have much influence in politics
1/2	He looks out the window
1	Women yell
1	[Women yell] "Wow, great!"
1	He is attractive
1	[He is attractive] when he is standing
1	[He is attractive] when he is sitting
1	He doesn't have this
1	He doesn't have that
1	Things aren't going well
1	[Things aren't going] very well
1	Things aren't going badly
1	[Things aren't going] very badly
1	He doesn't have any specific goal
1/2	He walks through the streets
1	The girls call to him
1	They call "Hey, crazy!"
1	They do something
1	They crowd around him
1	They almost tear him apart
1	It's a wonder that he is still in one piece
1	He doesn't have a car
1	He doesn't have a driver's license
1	People don't think he's very intelligent
1/2	People can say what they want (but he has sex appeal)

STUDENT DATA (DECEMBER 1986)

Subject	T1	TB	T1x	TBx	T2	TA	T2x	TAx	T3	T3x	Grade
101-01	1		12		9				6		2.5
101-02		19				2			9	7	2.0
101-03	14				16				12	13	3.5
101-04	16				2		0		7		3.0
101-05		7				7		6	7		2.5
101-06		3				5			3	4	2.5
101-07		22		15		6			8		3.5
101-08		11		10		8			5		4.0
101-09	4				1				3	9	3.0
101-10		1				4			6	9	2.5
101-11		15				3		7	6		4.0
101-12		20		32		7			4		3.0
101-13		10				3		6	9		4.0
101-14		5				6			6	3	2.0
101-15	17				14				12	16	2.5
101-16	19				18		23		18		4.0
101-17	5		7		2				2		3.5
102-01	20				6		11		13		3.0
102-02	19				3		4		13		3.0
102-03	5		6		3				10		3.5
102-04		12				7			21	8	4.0
102-05		15				6		14	2		4.0
102-06		15				6		19	12		3.0
102-07	16				7				8	8	3.5
102-08	16		26		7				12		2.5
102-09		26				8			8	11	2.5
203-01	20				12		2		5		3.5
203-02	17				10				8	9	2.5
203-03	5				0		5		14		3.0
203-04	5				5				10	17	3.5
203-05		9				8		19	15		3.5
203-06	15				13				9	8	3.0
203-07	8		13		7				4		3.5
203-08		14				11			13	6	4.0
203-09	11				1				6	6	1.0
203-10		24				11			11	15	2.5
203-11		22				9			12	10	3.5

T1 = Text 1, dialogue presented first on tape
TB = Text 1, dialogue presented second on tape
T2 = Text 2, news presented second on tape
TA = Text 2, news presented first on tape
T3 = Text 3, song presented third on tape
T1x, TBx, T2x, TAx, T3 = text listened to a second time
Grade = semester course grade (A = 4.0, AB = 3.5, B = 3.0, BC = 2.5, C = 2.0, D = 1.0)

STUDENT DATA (APRIL 1987)

Subject	T1	TB	T1x	TBx	T2	TA	T2x	TAx	T3	T3x	Grade
A02-01		15				8			8	8	3.5
A02-02		7		11		2			6		3.0
A02-03	8				3				13	17	4.0
A02-04	12				8		12		2		2.0
A02-05		14				0		0	9		2.5
A02-06		7				2		2	7		3.0
A02-07		6				0			5	9	0.0
A02-08		13				10		12	12		3.0
A02-09		17				3			4	6	4.0
A02-10		13				10			12	19	3.5
A02-11		16				1		12	5		2.5
A02-12		16				8			5	8	2.5
A02-13	11				2		3		10		1.0
A02-14	4				5				6	6	3.0
A02-15	11				9		4		13		2.5
A02-16	17				2		6		10		3.0
J02-01	12				11				5	10	1.0
J02-02	10				2		14		16		3.0
J02-03	15				2				3	5	1.0
J02-04	7		5		7				10		1.0
J02-05	8				9		0		11		2.5
J02-06		8				3		5	9		1.0
J02-07	14				13				17	17	3.0
J02-08		17				17		20	17		3.5
J02-09		13				2			5	12	4.0
J02-10		11				3		3	12		2.0
J02-11		14		20		5			13		3.5
J02-12		11				11			8	14	3.5
J02-13		4				2			10	0	0.0
J02-14	23				17		14		11		2.0
J02-15		8				5		1	6		0.0
J02-16	14				16				9	14	3.5
J02-17		11				6			7	15	4.0
J02-18		10				5		9	8		3.0
S02-01	18				18		16		15		4.0
S02-02		13				15			11	10	2.0
S02-03	8		10		10				7		2.0
S02-04	15				19		25		13		4.0
S02-05		16				6			4	10	3.5
S02-06		11		7		0			5		2.0
S02-07	23				13		15		13		3.5
S02-08	6		7		10				8		3.0
S02-09		15				12		16	10		2.5
S02-10	21				14		18		14		2.5
S02-11	4				13		12		7		2.0
S02-12		12		11		6			6		0.0
S02-13		14				15			12	18	1.0
S02-14		16				14		11	8		2.5

MEANS and STANDARD DEVIATIONS

Students	Text	n	μ	s
101	T1	n = 17	11.12	7.15
	T2	n = 17	6.65	5.07
	T3	n = 17	7.24	3.98
	Tx	n = 17	10.53	7.78
102	T1	n = 9	16.00	5.75
	T2	n = 9	5.89	1.76
	T3	n = 9	11.00	5.12
	Tx	n = 9	11.89	6.92
203	T1	n = 11	13.64	6.64
	T2	n = 11	7.91	4.32
	T3	n = 11	9.73	3.69
	Tx	n = 11	10.00	5.39
A02	T1	n = 16	11.69	4.19
	T2	n = 16	4.56	3.65
	T3	n = 16	7.94	3.45
	Tx	n = 16	8.44	5.23
J02	T1	n = 18	11.67	4.30
	T2	n = 18	7.56	5.38
	T3	n = 18	9.83	4.08
	Tx	n = 18	9.89	6.63
S02	T1	n = 14	13.71	5.33
	T2	n = 14	11.79	5.09
	T3	n = 14	9.50	3.55
	Tx	n = 14	13.29	4.98

Tx = the text listened to a second time (mixed!)

ANOVA on December 1986 experiment
Three Texts within Subjects
assuming random order

	SSq	df	MSq	F	p
Mean	10159.08	1	10159.08	235.98	....
Between subjects					
Level(= Semester)	154.40	2	77.20	1.79	0.18
Level x Subjects (error)	1463.69	34	43.05		
Within Subjects					
Texts	808.39	2	404.19	21.45	**0.00**
Texts x Level	106.86	4	26.71	1.42	0.24
Texts x LevelxSubjects (error)	1281.54	68	18.85		

ANOVA on December 1986 experiment
Text 1 and Text 2 only, within Subjects
given random order

	SSq	df	MSq	F	p
Mean	7179.25	1	7179.25	164.34	
....					
Between subjects					
Level(= Semester)	71.45	2	35.72	0.82	0.45
Level x Subjects (error)	1485.34	34	43.69		
Within Subjects					
Texts	790.62	1	790.62	40.69	**0.00**
Texts x Level	95.48	2	47.74	2.46	0.10
TextsxLevelxSubjects (error)	660.65	34	19.43		

IN OTHER WORDS, there is no statistically significant difference between semesters. However, there is a statitstically significant difference between texts.

ANOVA on April 1987 experiment
Three Texts within Subjects
assuming random order

	SSq	df	MSq	F	p
Mean	13698.31	1	13698.31	410.82	....
Between subjects					
Level(= Semester)	291.10	2	145.55	4.37	0.02
Level x Subjects (error)	1500.46	45	33.34		
Within Subjects					
Texts	493.69	2	246.85	20.21	0.00
Texts x Level	174.81	4	43.70	3.58	0.01
Texts x LevelxSubjects (error)	1099.51	90	12.22		

ANOVA on April 1987 experiment
Text 1 and Text 2 only, within Subjects
given random order

	SSq	df	MSq	F	p
Mean	9809.82	1	9809.82	319.70	
....					
Between subjects					
Level(= Semester)	329.60	2	164.80	5.37	0.01
Level x Subjects (error)	1380.81	45	30.68		
Within Subjects					
Texts	457.32	1	457.32	34.63	0.00
Texts x Level	102.76	2	51.38	3.89	0.03
TextsxLevelxSubjects (error)	594.23	45	13.21		

Friedman Test
(December 1986)
on pair-wise differences among texts
using Tukey T confidence interval

Total subjects:	yes		
95% confidence interval:		T1 vs. T2 = 1.54 ± 0.544	yes
		T1 vs. T3 = 0.73 ± 0.544	yes
		T2 vs. T3 =-0.32 ± 0.544	no
101 subjects:	4.97	0.0833	no significance
102 subjects:	yes		
95% confidence interval:		T1 vs. T2 = 1.61 ± 1.103	yes
		T1 vs. T3 = 0.72 ± 1.103	no
		T2 vs. T3 =-0.89 ± 1.103	no
203 subjects:	8.59	0.0136	yes
95% confidence interval:		T1 vs. T2 = 1.23 ± 0.998	yes
		T1 vs. T3 = 0.82 ± 0.998	no
		T2 vs. T3 =-0.41 ± 0.998	no

IN OTHER WORDS, what difference there is exists in the second and third semester groups, when compared with the first semester group. The first semester seems to have found all three texts equally easy/difficult. Also, Text 1 (dialogue) seems to be most significantly different from other two texts. Most likely it is easiest, since graphs show general drop in performance on Text 2 (news) and appproximately equal performance on Text 3 (song) compared with Text 1.

Friedman Test
(April 1987)
on pair-wise differences among texts
using Tukey T confidence interval

Total subjects: yes

95% confidence interval: T1 vs. T2 = 0.89 ± 0.477 yes
T1 vs. T3 = 0.62 ± 0.477 yes
T2 vs. T3 =-0.27 ± 0.477 no

A02 subjects: yes

95% confidence interval: T1 vs. T2 = 1.50 ± 0.828 yes
T1 vs. T3 =-0.84 ± 0.828 yes
T2 vs. T3 = 0.66 ± 0.828 no

J02 subjects: yes

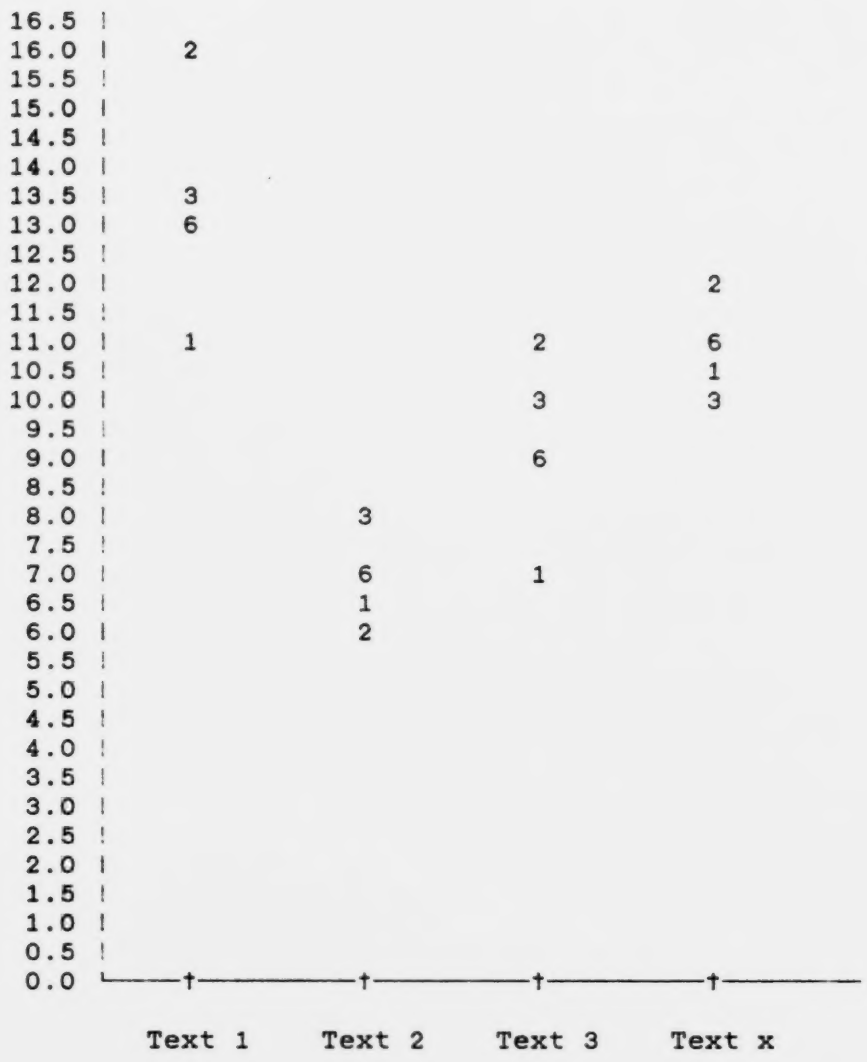
95% confidence interval: T1 vs. T2 = 0.94 ± 0.780 yes
T1 vs. T3 =-0.72 ± 0.780 no
T2 vs. T3 = 0.22 ± 0.780 no

S02 subjects: yes

95% confidence interval: T1 vs. T2 = 0.11 ± 0.885 no
T1 vs. T3 = 1.07 ± 0.885 yes
T2 vs. T3 =-0.96 ± 0.885 no

IN OTHER WORDS, differences exist in the second and third sections, when compared with the first, and steadily increase from the second to the third. Text 1 (dialogue) seems, again, to be most significantly different from other two, although this time for all three groups.

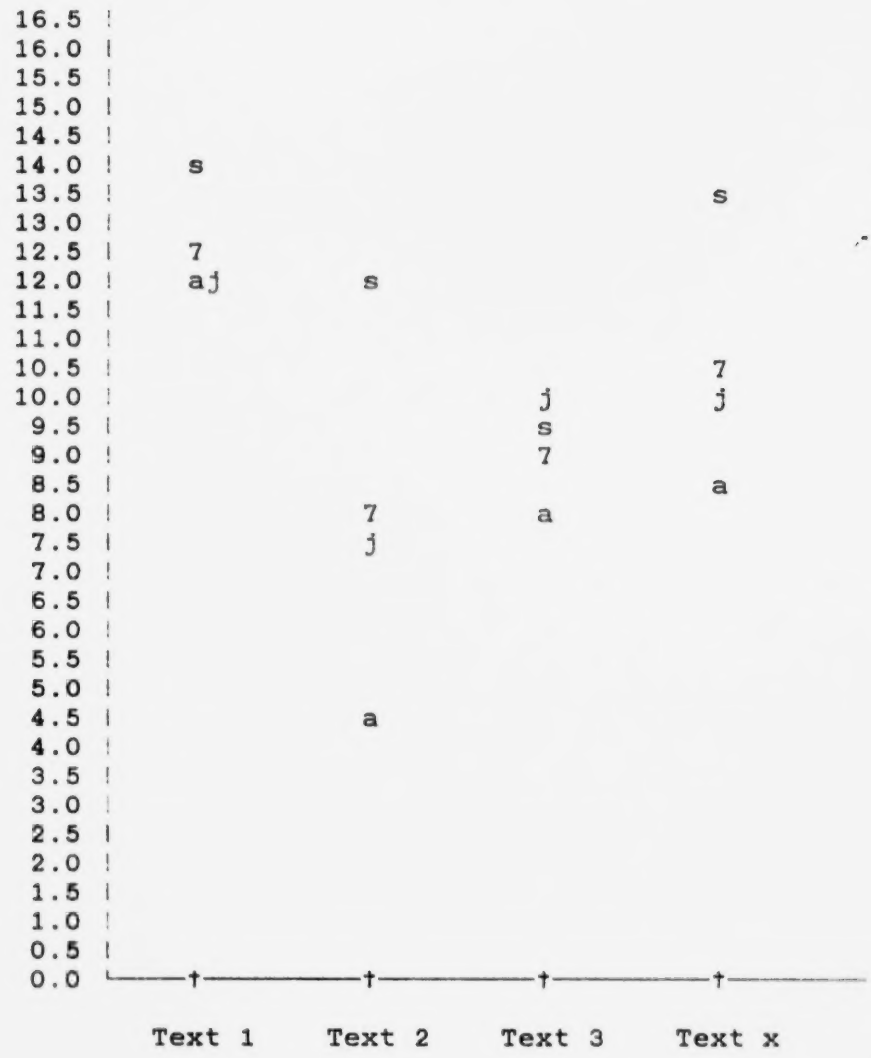
Group averages across texts
(December 1986)



1 = 101
2 = 102
3 = 203
6 = all subjects in December 1986 experiment

Text x = score on second text, regardless of text

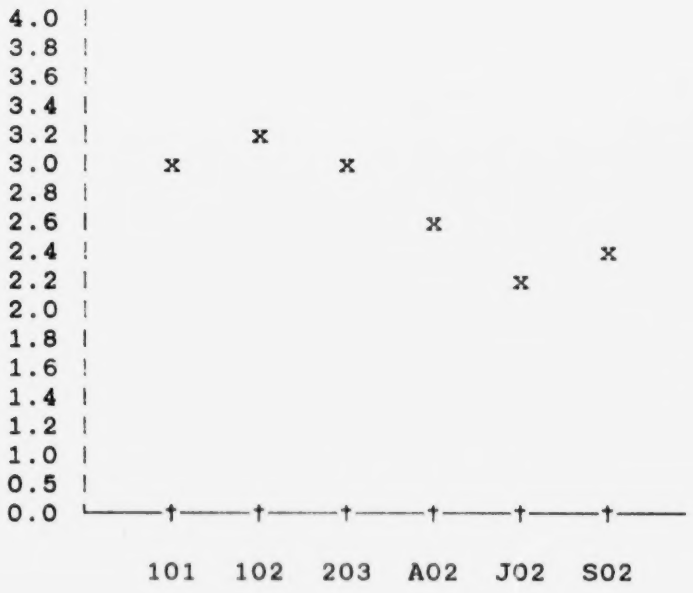
Group averages across texts
(April 1987)



a = A02
j = J02
s = S02
7 = all subjects in April 1987 experiment

Text x = score on second text, regardless of text

Group grade point averages
(December 1986, April 1987)



SAMPLE PROTOCOLS

[102 = December experiment -- A02, J02, S02 = April experiments]

[no special directions given!]

102-01: A man greets Helga - She says good day. Helga tells the man she's from Berlin - He is from Stüdtgart. He asks her if she likes it, and she says NO, it's too big. Then she asks he could help her. He tells her yes, after the lecture.

102-02: Two people are in Berlin. The women thinks the city is very large. She wants the man to help show her around the city. They meet and introduce themselves to each other. They exchange names and tell where they are from. Neither sounded to thrilled.

102-03: Hans comes from Struttgart. Stuttgart is large. He is talking to Helga. Helga asks how Stuttgart is.

102-04: A girl in the story has the name of Helga Sturgoid. This girl wants the boy to help her with something. He says he will if she shows him what to do. There is something mentioned about the weekend. This is a dialog. He also asks her if she saw something. Her answer was 'no'.

102-05: His name is Martin, hers is Helga. He's from Stuttgart, she is from Berlin (?). She doesn't know the city well & asks him for help. He agrees to go with her after the lecture.

102-06: Martin and Helga meet and say hello. Martin comes rom Stuttgart. Helga comes from Berlin. Helga is confused because the city is so large, so Martin says that he will show her around after the lecture. They agree to this.

102-07: There is a conversation between two people. The lady's name is Helgar and she doesn't like Berlin because the city is too large. The man is from Stuttgard. He asks her how long she will be in Berlin. The story (conversation) takes place in the morning.

102-08: Martin and Helga introduce themselves to each other. Martin is from Berlin. Helga is from a city not as big. She asks if he could help her with something. He said yes after the lecture. They asks each other where they come from.
[second listening]: Martin & Helga introduce themselves and ask where they come from. He is from Strütgard. She needs help finding her way around the big city and asks him to help her. He says yes, after the lecture is over with.
102-09: It is a conversation between a guy & a girl who meet. They introduce themselves and where they're from. The girl is a vistor to this city but the boy lives there. The girl comments on how big the city is and ask the boy for help, he agrees to help her.

A02-1: This was a short conversation between a guy and a girl. They exchanged greetings and introduced themselves. I don't remember what they said, but I could understand them much better than the first passage. The girls name was Helga and the guy's name was Mathien something, and one of them was from Stuttgart.

A02-2: My name is Man Good Morning! My name is Woman I come from Stuttgart That city is so big Do you come from there, No. [second listening]: Hi, My name is Martin Schlickenhour Morning my name is Helga / I come from Stuttgart, where are you from Were you in Berlin long / no, the city is so big But I want to do something.

A02-3: Helga & some guy tell where they are from. They talk a little. Helga says something about a large city. The guy could use some help understanding his lecture & Helga offers to help him. The conversation moved pretty fast. I didn't pick much up.

A02-4: First they introduced themselfs to each other. The girl is coming from Berlin. The boy asking if the girl knows English and the girl says she need some help then the boy is going to help the girl in English.

A02-5: My name is Mrir! Conversation between Mrir who is from Stutguard and a girl from somewhere. He needs help finding his way around because the city is so big. She offers to help him.

A02-6: Someone was asking if the other person was going somewhere or doing somethin. However one person had something to do the other person offered to help

A02-7: I'm (whoever) I'm Helga I Are you coming from Berlin She goes to school there OK -That's more like the German I'm used to. This souns like a simple German Conversation.

A02-8: A dialogue between a man and a woman. The man comes from Stuttgart (sp.) The woman's name is Helga. She is visiting Berlin, and needs help because the city is so big. The man offers to help her, and they leave the room.

A02-9: This was a conversation between Helga & a guy. They introduce themselves first. She was new to Berlin. The city is very large and she asked if he would help her to which he said yes.

A02-10: This one was a conversation between a man and a woman. They introduced themselves and told each other where they were from. The woman didn't know her way around the big city ver well and the man offered to take her around and show it to her after the lecture. I could understand this dialogue much better because the words used were much more common.

** Listen to the following dialog between two students. **

J02-1: The girls name Helga Kunalt the guy comes from Stutgard Mathem Schlemmier they just met I think he is a tutor for her math lecture

J02-2: The boy asked who she is and her name is Helga. She has arrived in Studtgart and finds it very big. She asks him if she can help him and he says he wants help on the lecture. there is also something to do with showing the city, I think.

J02-3: The girls name is Helga. She is not from Stuggard. The boy is. Helga asked the boy to show her around the city because it is so big and she has just come there. The boy said he would show Helga around

J02-4: This was a dialog between Martin and Helga. Martin tells of himself going to Stutgart. Helga relplies that it is a big city. This was very easy to understand, but a few words were not known to me.
[second listening]: They lose it a little at the end of the conversation. Martin mentions coming from Stutgart (I think) and mentions a lecture. I really didn't pick up that much detail. I do better when I read written German, rather than hearing spoken German when it comes to understanding.

J02-5: One has just come to the city where the other lives. The city is extremely large, and she would like some help making her way around.

J02-6: The girls name is Helga. She introduces herself to the guy who is from Stüttgart. They talk about meeting later on.

J02-7: Helga & Heinz talk about Berlin being large - Helga is visiting & finds the city too large so she asks him to show her around after the Lecture - he agrees. It is a conversation. They speak fast and naturally. It is hard to hear some of the words - the voices dropped so much. They sound like native German speakers.
J02-8: His name was Martin and hers was Helga. He was from Stuttgart, and she had just come from Berlin and needed help finding her way around the University. He told her how to get tot he lecture hall. It seemed like a fairly normal conversation for 2 people to have, beginning with introductions and the "Where are you from" type questions.
J02-9: The two individuals introduced themselves. The woman's name was Helga. She came from Stutgart. Helga asked the man if he would help her. The man agreed to help her after class.

J02-10: The boy asks Helga if she will stay long and offers his help Helga replies no, she is here for only a short time She asks him where he lives. He replies that he comes from Stuttgart.

Listen to the following dialog between two students in Berlin.

S02-1: The man is from Stuttgart The woman's name is Helga, she needs help (finding her way around the big city of Berlin?) The man can help her after the lecture. They both sound very unsure of what they're talking about, at least at the end when they make plans. The woman wounded surprised/unwilling to introduce herself.

S02-2: Martin & Helga were having a conversation. She said she didn't like the city very much because it was too large. She also said she had not been in Berlin studying for very long. Martin said he would help her after the lecture was over.

S02-3: The short conversation was about a young woman who was in a large city. She talked with the man and he argreed to help her. The conversation opened with a greeting and then moved into the material.
[second listening]: The woman comes to the large city and says is lost. She asks the young man if he could possibly help her. He agrees but must do other things also.

S02-4: These are two students, a male and a female. The female (named Helga) is from Katin? - the male is from somewhere near Stuttgart. She is new in Berlin & expresses concern about directions saying that Berlin is so big. He offers to help her and to show her around.

S02-5: They introduce themselves. The man is from Stuttgart or something. The woman doesn't know where something is in Berlin, so they are going to meet after lecture. Apparently the man knows Berlin. The woman said Berlin was too big. She asked if the man could help her.

S02-6: Martin & Helga were speaking. Martin is from Stutgard. Helga comes from a large city.
[second listening]: Martin & Helga are talking. Helga feels Berlin is a large city.

S02-7: Two students, one named Helga, the other I do not know, meet each other. The other (who is male) askes Helga how long shes been in twon and where she is from. She asks where he is from, Helga thinks the tawon is big. She wants help traveling in it.
S02-8: Two people, Helga & _____ are talking. The man just returned from Stuttgart.
[second listening]: Martin & Helga introduce themselves. Martin just came back from Stuttgart. Helga thinks that wherever she came back from is much too big.
S02-9: The students names are Helga and Martin. There are two of them. He asks her where she is from. She says something about a large city. (Berlin?) They leave to go to their lecture.

A02-1: [news] Boy! That guy spoke fast. He seemed to talking about Germany, but I'm not sure of what it was specifically. I remember hearing the word "politisch", so it must have been something about politics; I also heard Helmut Kohl's name mentioned. I think it was something about Germany, because of the names of places I picked up like Danzig, München, and something about France or something French. I don't think my attention was very focused for this first one.
[song] This one was pretty funny. The guy was singing about how he doesn't have things like a house or a car, but he has sex appeal. This one is like the last one - I don't remember much but I understood what he was singing.
[song second listening] I listened to the third one again. I didn't really pick up much more than I did the first time. I got the impression that other people think he has sex appeal too, when goes to the disco or walks down the street. I think he said something to the effect of, "politics aren't for me" at one point.

A02-3: [news] Whoa! I think it is one in the morning. He says something about the CDU & SPD, german political parties. He talks about work.
[song] Cool Tune! This guy doesn't have much but sex appeal! No house / No car / None of this or that / When I walk down the street.... / One can certainly say that he has sex appeal.
[song second listening] I had to hear that tune again! He has no house / no schloß? / a small bank account, a weak understanding of politics. / but he's got a lot of sex appeal. When he opens the window and is seen by a woman something to do with sex happens. When he walks through the street the girls go crazy. One can certainly say that he has a lot of sex appeal

A02-10: [news] I didn't understand much except something about Helmut Kohl, the time (1 o'clock) and I didn't realize it was a new brief until I heard the weather report. Most of the vocabulary was way over my head and it sounded as if the narrator was speaking very fast, but I guess I'm just used to a slow pace.
[song] Good Song! This guy had no car, no house, no political power, but he had sex appeal. When he looked out the window, women screamed for him outside. He expected them to rip him apart at any second.
[song second listening] The end of the song says. "you can say what you will, I've got sex appeal." He says also he has no car, no house, no lock? but one thing he has in abundance is sex appeal. He's got nothing in the bank. When he looks out the window, women begin to scream, they almost tear him apart and he wonders that he is still in one piece. Something else about it being irrelevant whether he sits or stands. Something about walking down the street and driving women crazy. His name is Spitze. It was sometimes difficult to understand his pronunciation when he was singing low.

Listen to the following news broadcast.

***

Listen to the following song.

J02-1: [news] 1300 Uhr talks about France Dazing & Solidarity the weather will remain sunny temp 50-60°
J02-3: [news] It is one o'clock in Frankreich
[song] I have no house with a closed door. I have no money in the bank. When I go down the steet people can say I have none of these things but I have sex appeal. I am nothing special, but I have sex appeal. When I look out the window and see a lady she will say that I have sex appeal, even though I have nothing else.
[news second listening] Here at the sound of the bell it will be 1 o'clock. There was something phenomenal in München. The broadcaster could be Paul but I'm not sure. The weather, it is sunny and will be 14 to ? degrees today.

J02-5: [news] The time was 1:00 in the afternoon. The man mentioned Frankreich and then talked on. I didn't catch the whole meaning. He talked rather quickly. He mentioned the weather, which was sunny. He talked in such a montone that it is somewhat difficult to understand.
[song] The man has no house or castle, auto... but he has a lot of sex appeal. This was very easy to understand. The speaking (singing) was slower and it flowed. Very corny.

J02-6: [news] The time was 1:00 in the afternoon. The weather was sunny and dry with good temperature. What the rest said, who knows?
[news second listening] Something about a Professor.
J02-7: [news] It is one o'clock. Someone is sick. A programe for CDU.
[news second listening] Not much new. Its the one o'clock news and he's going to tell us about something.

J02-8: [news] This is a news brief. He announces the time - one o'clock then gives news items. He talks of politics, mentions the Primeminister of the B.D.R. and France. He gives a weather report. Most of this went over my head. It was fast, very fast and expressionless, which give hints.

J02-9: [news] This was a newscast - it was 1pm (13:00). It covered events in France. It mentioned the Polish Solidarity workers. Bundeschancellor Kohl was in Munich, it gave details of that, and ended with the weather. There was something about bombs, but I don't remember quite what it said. It seemed like a typical news brief, covering world events and the weather.
[news second listening] This is a news program from Bavaria - and at the sound of the gong it was 13:00. It covered recent events in France, and mentioned the 9 provisional somethings of the Solidarity workers. Koll was in Münich, addressing the CDU & CSP (?). It ended with the weather, giving the temperature.

*Listen to the following news broadcast.
You will hear three news stories and the weather.*

S02-1: [news] It's a news broadcast at 1300 hours. The first story is that the Pope is coming to visit Germany; Chancellor Kohl has commented on the visit. Then the pope will go to Dantzig, and meet with Solidarity leaders. The weather report is last, temperatures between 14-16 degrees.
[second listening] Forget what I said about the Pope visiting Solidarity leaders In a separate story. Lech Walesa's comments were reported, and Kohl talked about reasons for something or other in the CDU & CSU. Weather will be sunny & dry.
S02-2: [news] The broadcast was at 1 o'clock. The weather was to remain the same. The broadcast was out of Munich. The "President" said something about two of the political parties in Germany.
S02-3: [news] The news was at 1pm (13 hour). The man told the news but I couldn't understand it. The weather is to be sunny. The next newscast will be at 2 pm (14 hour).

S02-4: [news] This is the Bavarian news broadcast at 13:00 - 1:00. First he spoke about Pope John Paul II and about some trip that he was taking to france. Then he spoke about Polish workers and something about solidarity. Then he had a story from Munich. The temperature will be 14-20°.
[second listening] At the gong tone it will be 13:00. (1:00) This is the Bavarian newscast. First, Pope John Paul II is taking (or has taken) some sort of trip to France. Polish workers are doing something with solidarity in Munich. Bundeskanzler Kohl is doing something with the elections - dealing with the CDU & one other party. The temperature will be between 14 & 20.°

S02-5: [news] It was in german. There was something about Mr. Kohl, and France and the weather.
S02-7: [news] The news announcements start at 7pm. The first is something about someone visiting Frankreich. The second is about Helmut Kohl. The third I am clueless on. The weather is dry and the tempeture is about 50°.
[second listening] I listened to the news broadcast. Someone is visiting Frankreich. I dont know why. Something is happening München. Bundeskanzler Kohl is doing something. The news announcer started by saying this is the news at 7pm. The weather is dry and tempetures will range between 50° -70°.

S02-9: [news] The weather is sunny and dry. The Bundescounseler is going on a trip to France. A bell rang and the time was announced.
[second listening] The Bundescounseller is not making trip to France, I think he is making an announcement. It is 13:00 hours, and a bell rings, the weather is sunny and dry. Polish workers are protesting. Someone is making a trip to France.

INSTRUCTIONS TO STUDENTS

****

LISTENING IMMEDIATE RECALL PROTOCOL
(German)

Please read these directions carefully before starting:

You will hear three texts in German. All three will be on the cassette which you will be given. At the beginning of each text you will hear a German number, "EINS" (1), "ZWEI" (2) or "DREI" (3). This number will be spoken three times. Listen carefully to the text which follows each number. At the end of each text you will hear the word "ENDE" (end). Between each text will be a pause of approximately three minutes in length.

1. Once the spoken text begins, DO NOT STOP THE TAPE RECORDER.

2. As you listen, DO NOT MAKE ANY WRITTEN NOTES.

3. Once a text ends (marked on the tape by the word "ENDE") write down, on the paper provided, EVERYTHING you can recall about the text. It is not necessary that you have understood everything, simply that you write down everything that you retain from listening to the text once. This includes impressions and reactions to the text, as well as facts.

4. Please write IN ENGLISH and, most important, IN COMPLETE SENTENCES.

You may take as much time as you need to write down what you remember from the text. However, because the tape will be running, you will have to watch out for the beginning of the next text. If you are still writing when you hear the next number ("ZWEI" or "DREI"), stop the tape recorder immediately and finish writing before you continue with the next text. Please indicate on your sheet that you have taken longer than three minutes. Then start the recorder again.

5. When you are finished with the third text, rewind the tape and listen to any ONE of the three texts (your choice!) once again. Do not make any written notes this second time either. Once you have listened to the text, write down any new information you recall from it or revise anything you recall from the first listening, WITHOUT LOOKING BACK AT THE FIRST SUMMARY

6. DO NOT LOOK BACK AT AN EARLIER SUMMARY THAT YOU WROTE.

7. Fill out the attached questionnaire after you have completed listening to one of the texts the second time.

STUDENT QUESTIONNAIRE

****

LISTENING IMMEDIATE RECALL PROTOCOL
(German)

NOTE: the following information is being requested only for purposes directly connected with this research and will remain completely confidential.

Name: _____

Student ID Number: _____

Year at the University of Wisconsin: Fr So Jr Sr Grad Other

Current German course: _____

Have you ever had a German course before? If yes, when, where, and what kind of course?

_____

Have you ever been in a German-speaking country? If yes, when, where, and how long?

_____

Do you use German outside of class in any special way (family, pen pals, job, etc.)? If yes, describe the nature of the use.

_____

Major/minor subject(s): _____

Thank you very much for taking time to participate in this project.

FROHE FESTTAGE!

Notes

1. Byrnes, Heidi. "The Role of Listening Comprehension: A Theoretical Base." Foreign Language Annals 17 (1984): 317-29.

2. Richards, Jack C. "Listening comprehension: approach, design, and procedure," 189-207 in The Context of Language Teaching. Cambridge: Cambridge University Press, 1984.

3. Winitz, Harris, ed. The Comprehension Approach in Foreign Language Instruction. Rowley, MA: Newbury House, 1981.

4. Joiner, Elizabeth G. "Listening in Foreign Language," 43-70 in Barbara H. Wing, editor. Listening, Reading, and Writing: Analysis and Application. Middlebury, VT: Northeast Conference on the Teaching of Foreign Languages, 1986.

5. Taylor, Harvey M. "Learning to Listen to English." TESOL Quarterly 15, 1 (March 1981): 41-50).

6. Meyer, Bonnie J.F. The Organization of Prose and its Effects on Memory. Amsterdam: North-Holland Publishing, 1975.

7. Bernhardt, Elizabeth B. "Testing Foreign Language Reading Comprehension: The Immediate Recall Protocol." Die Unterrichts-praxis 16 (1983): 27-33; and "Reading in the Foreign Language," 93-115 in Barbara H. Wing, editor. Listening, Reading, Writing: Analysis and Application. Northeast Conference on the Teaching of Foreign Languages, 1986.

8. Richards, Jack C. "Listening Comprehension: Approach, Design, Procedure." TESOL Quarterly 17 (1983): 219-40.

9. Note that Meyer did not compare texts with one another. In most cases, she did not present different texts to the same subjects at the same time. However, since the present research involves presenting the three texts in question in quick succession within a given time sequence, and since the scoring procedure is essentially the same for each text, with approximately the same potential range of scores, it is legitimate to treat the three texts as three different treatments which can be compared statistically.

10. See John Neter, William Wasserman, Michael H. Kutner. Applied Linear Statistical Models. Regression, Analysis of Variance, and Experimental Designs. Second Edition. Homewood, IL: Richard D. Irwin, Inc., 1985; pp. 1121-24: Two factor experiment with repeated measures on one factors; pp. 952-54: Generalied Random Block Design (one grouping factor and one within factor).